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ABSTRACT

Four papers give attention to the physically handicapped child. The development of young cerebral palsied children according to Piaget's sensorimotor theory is discussed by F. Annette Tessier. The nature of crippled and other health impaired populations and provisions for their education are summarized by Joan R. Ward, based upon information presented at the Special Study Institute on Professional Preparation for Educators of Crippled Children (West Point, New York, December 9-12, 1970). Richard Galusha describes the Dr. J. P. Lord School for Physically handicapped children, an Omaha, Nebraska public school. In the fourth brief paper, Joe Gaughan reviews a model Title VI-B program for physically handicapped children in Nebraska - a Therapeutic Nursery School. (KW)

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PREFACE

Physical Handicap is a collection of four papers selected from those presented at the 49th Annual International CEC Convention, Miami Beach, Florida, April 18-24, 1971. These papers were collected and compiled by The Council for Exceptional Children, Arlington, Virginia. Other collections of papers from the Convention have been compiled and are available from the ERIC Document Reproduction Service. Other collections may be found by consulting the Institution Index of Research in Education under Council for Exceptional Children or the Subject Index under Exceptional Child Education. Titles of these other collections are:

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THE DEVELOPMENT OF YOUNG CEREBRAL PALSIED CHILDREN ACCORDING TO PIAGET'S SENSORIMOTOR THEORY

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A current approach in the study of early mental development is concerned with the dynamic process by which intelligence develops. Emphasis is upon continuous interaction between the child and his environment, and upon the importance of stimulus variation and adequacy. The leading exponent of this point of view is the Swiss zoologist, psychologist and epistemologist, Jean Piaget. Based on observations of his own three children, Piaget (1952, 1954) reasoned that each advance in an infant's sensorimotor behavior must represent an advance in his understanding made possible by his own experience. Therefore, the mental growth of the child is seen as reciprocal interaction of experience and understanding which begin from birth and evolves progressively through distinct stages. As Woodward (1963) expressed it:

> Piaget's interest lies in the kind of psychological operation that leads to a result rather than in the fact of success or failure alone, and the aim of the investigation is to interpret behavior and not merely to make an inventory of items that appear at successive ages. . . . Since the important feature is the order of steps and not the age at which they are attained this approach can be applied to individuals whose rate of development is extremely slow. (p. 297)

Piaget's sensorimotor theory appears to provide a conceptual framework from which to study the behavior of children who may be retarded in mental and physical development.

One group of children whose developmental processes are not clearly understood are those identified as cerebral palsied. Cerebral palsied children present a varied and often complex picture of problems and disabilities. The manifestations of impaired neurological function may be observed as a variety of neuromotor, intellectual, sensory, and behavioral signs and symptoms singly or in combinations and in varying degree (Denhoff & Robinault, 1960). In the early stages of development, it is often difficult to define clearly each individual case, because the neurological signs and symptoms change as the nervous system matures. With this in mind, all aspects of assessment must be approached with caution. Considering the complexities involved in the diagnosis of a young cerebral palsied child, Illingsworth (1962) stated:

> There is no short cut to developmental assessment. It can only be done against a thorough knowledge of the normal and of variations from normal. It must be based on a careful detailed history, physical and developmental examination and interpretation of the findings against the background of knowledge of the difficulties of prediction. (p. 40)

One of the greatest problems facing those concerned with the education and treatment of the young cerebral palsied child is the assessment and evaluation of the child's mental development. The traditional approach has been to use standard intelligence and developmental tests. The often used infant tests are usually based on physical and motor development, which penalize a child with a motor handicap. Furthermore, the predictability of infant test for later intelligence measures has been seriously questioned by Bayley

(1958); this criticism seems to be even more valid for early prediction of a cerebral palsied child's intellectual future.

Piaget addressed himself only to the process of development in the normal child. Other researchers (Woodward, 1959, 1963; Garfield & Shakespeare, 1964; Tabary & Tardieu, 1963) have attempted to apply his theory, especially of the sensorimotor period, to observation and evaluation of atypical children. Their results have been encouraging and warrant further research on similar populations. To date, none of the reported studies has concentrated on the young cerebral palsied child who is chronologically within the sensorimotor period of development as defined by Piaget (1952, 1954). Therefore, with the personal encouragement of Woodward (1967) and the recognized need for new approaches in the assessment of the young cerebral palsied child, this present study was formulated.

Purpose

The major purpose of this study was to determine the applicability of Piaget s sensorimotor theory to young cerebral palsied children. The main questions to be answered were:

1. Do cerebral palsied children develop sensorimotor intelligence and object concept in the same sequence as normals, as defined by Piaget's theory?
2. Does sensorimotor intelligence and object concept have parallel development in cerebral palsied childdren as Piaget found in normals?

3. Are there differences in stage level development when cerebral palsied and normal children are compared on the basis of intelligence ratings?
4. Is it feasible to construct a reliable research instrument, based on Piaget's sensorimotor theory, to assess the stage level development of cerebral palsied children?

Other more specific questions considered the functions of chronological age, intelligence ratings and motor disability in relation to assessment results.

Procedure

The various sensorimotor schemata that Piaget (1952, 1954) observed in his own three children as they encountered and accommodated various objects and situations provided the framework for the research instrument. In addition, from the research design and procedures already established by Woodward (1959), and from the studies of Escalona and Corman (1967, 1968), Kohlberg (1958), and Uzgiris and Hunt (1966), specific stage level items, methods of administration and response criteria were incorporated into the instrument for this present investigation.

The two major aspects of the sensorimotor period included in this study were: (1) sensorimotor intelligence and (2) object concept development. Study of causality and the spatial and temporal fields, which are other aspects of this period, were not included in this study.

Sensorimotor intelligence, which deals with modification of elementary behavior patterns into more complex ones, constituted Part I of the instrument. Appropriate observations and problems related to the development of sensorimotor intelligence were selected for the six stages as defined by Piaget (1952). The other category, object concept development, which concerns the child's knowledge of the objective world, and parallels the development of sensorimotor intelligence, constituted Part II (Piaget, 1954). Since object concept behaviors are not clearly defined in the first two stages, the sequence of schemas were designed only for stages III through VI.

Using a preliminary form of the research instrument, a pilot study was carried out on five CP children, enrolled in the UCLA Cerebral Palsy Prenursery Program, whose functional handicaps ranged from mild to severe. Purpose of the initial study was to determine appropriateness of test items in relation to motor handicap and interest in test materials. As a result, the instrument with procedures and scoring criteria was put into final form.

Subjects for the major study were 10 normal and 20 CP children between 18 and 36 months of age. The CP children were further divided into two groups of 10 on the basis of gross intelligence ratings, and were classified as "rated-not-retarded" and "rated-retarded." All CP subjects were enrolled in special nursery school programs located in Los Angeles County.

The investigator administered the final form of the Piaget

Sensorimotor Research Instrument to all subjects on a test-retest schedule. For purposes of final analysis each item attempted was scored as pass or fail; notes were included on the details of the behavior observed in the performance of each item. On the basis of the final results, subjects were classified according to the highest stage level reached for: (1) sensorimotor intelligence and (2) object concept development.

Summary of Results

Results indicated that: (a) the Piaget Sensorimotor Research Instrument had reliability for the total sample; (b) normal and CP children demonstrated the sequence of stage level development as defined by Piaget, but, as shown by the CP rated-retarded group, the rate of progress was not the same for all children; (c) for normal and CP children, level attained on sensorimotor intelligence corresponded to level attained on object concept development; (d) quantitative results indicated that normal and CP rated-not-retarded were similar in performance, while qualitative results suggested that there were differences; (e) CP rated-retarded were significantly lower on the intelligence rating and the two Piaget measures than the CP rated-not-retarded.

Discussion

Evidence for and against Piaget's theory of intellectual development bears upon the concepts of stage and sequence of development. He postulated that during the sensorimotor period, the child

progresses through six major stage of development which are attained in a sequential order. According to Piaget, each stage can be defined by characteristic behaviors, the behaviors of one stage serving as the foundation for the stage to follow. Other investigations (Escalona & Corman, 1966; Gouin-Decarie, 1965; Uzgiris & Hunt, 1966) have confirmed Piaget's postulation of stage order development.

Woodward's (1959) study, which served as the impetus for this present investigation, demonstrated that older mentally retarded children followed the normal sequence of stage development in that they displayed characteristic behaviors for all stages prior to the highest level reached. Another major finding of Woodward's study was that there was a relationship between sensorimotor intelligence and object concept development. Woodward found that the level attained on sensorimotor intelligence corresponded to the level attained for object concept for the majority of severely retarded subjects.

Results of the present study support previous findings in confirming the stage sequence and parallel development of sensorimotor intelligence and object concept abilities. This is particularly interesting in that the subjects in this study included very young, seriously disabled children as well as young normal children. Woodward's study also dealt with atypical children; her subjects older mentally retarded, nonphysically handicapped children. Despite sample differences in diagnostic classification and age range, there is enough similarity of findings to conclude that Piaget's theory of sensorimotor development appears to be applicable to atypical

children of different ages and with different developmental problems. The findings from the small normal sample used for this present study supported Piaget's theory as well as being consistent with the independent studies of Escalona and Corman (1967), Gouin-Decarie (1965), and Uzgiris and Hunt (1966).

From an overview of the various findings of studies based on Piaget's sensorimotor theory and from the results of this present study, there is positive evidence to support his concepts related to stage levels and sequence of development for normal as well as atypical children. However, performance of the mentally retarded and cerebral palsied groups indicated that rate of progress through the stage sequence was not the same for all children. This evidence does not negate Piaget's theory; it emphasizes the importance of the processes of sequential development rather than the age at which the stages are attained. The Piagetian formulation provides a means of placing children on an ordinal developmental scale which avoids traditional age comparisons. Piaget provided little normative data for chronological age comparisons. The ages quoted by Piaget for the beginning and end of each stage are suggested as average ages, but they are only approximate. Such factors as maturation of the nervous system, the child's experience of physical objects, and his social interactions are considered more meaningful determinants of development than chronological age (Woodward, 1963).

Inspection of quantitative results of the present study reveals that performance levels for normal and CP rated-not-retarded were

similar while CP rated-retarded were significantly lower. This raises an important question in regard to the normal and CP rated-not-retarded groups. If a child's rate of development is influenced in this early period by the type and amount of motor interaction with the environment, as Piaget (1952, 1954) postulates, it would be presumed that a child with a motor disability would progress at a slower rate than a normal child through the developmental sequence. On the basis of the quantitative scores of normal and CP rated-not-retarded subjects, it appears that CP rated-not-retarded subjects were not seriously affected by the motor disability. The implication, therefore, is that motor interactions with the environment are not as important as Piaget believes them to be in the process of intellectual development. However, Piaget emphasizes that development must be evaluated from both qualitative as well as quantitative aspects of performance. For Piaget, the methods and styles of problem solving and the types of behavior observed are as important as the end result. His aim is to interpret behavior and not merely to make an inventory of items of behavior that appear at successive ages.

On the basis of the examiner's subjective observations, consistent qualitative differences were noted between groups of normal intelligence. The CP sample, by comparison to the normal sample, exhibited: slower rate of response to problems; need for more trials in problem solving tasks; more limited range of interactions with objects and toys; lower level of frustration tolerance; and

the need for more encouragement from the examiner to attend to tasks at hand. The normal subjects in general showed a qualitatively higher level of response in terms of rate of problem solving, more sustained interest, and a wider range of interactions with objects, toys, and the examiner. It must be emphasized that in order to draw conclusions from the performance of individual children, the qualitative as well as the quantitative results must be considered. When various disability and nondisability groups are compared, as in the present study, the objective or quantitative findings of stage level accomplishment must be tempered by the qualitative findings which describe process. Although the CP rated-not-retarded group reached stage levels at the same rate and age as the normal group, qualitative differences were marked. Thus, although severe motor disability did not affect the quantitatively measured level of development, there were important aspects of process which appeared to be negatively affected by the motor limitations. The cumulative affects of such limited interactions with the environment cannot be determined in the present study because of the restricted age range of the subjects. However, the qualitative observations suggest that CP children of normal intelligence may have limited and sometimes inadequate sensorimotor bases for optimal development. The qualitative findings also suggest the need for incorporating more intense and extensive sensorimotor activities and experiences into therapeutic programs in the early years.

Piaget has suggested that the various schemata at any given stage level may be achieved through a variety of interactive experi-

ences with the environment. The nature of the motor disability of CP children restrict markedly the range of experiences which develop normally for nondisabled children. CP children's "incidental learning" may be seriously minimized by their physical limitations. The kind of quantitative and qualitative evaluation derived from the Piaget scale developed for this study allow specification of the level of activity which the young CP child needs. Therapeutic programs could be developed to provide a broad spectrum of experiences and interactions which are directed at specific stage levels rather than a global behavioral levels. It seems probable that CP children need more, not fewer, experiences at each level to allow solid development and consolidation of schemata at each stage. The fact that a child is able to achieve in some tasks at a given level, or to function at that level in terms of quantitative measures, but still show qualitative deficits, suggests that the CP child needs more and broader experiences at the basic sensorimotor stages before being presented with higher stage level tasks. The value of a diagnostic instrument is in part the direction it gives for remedial procedures. The Piaget instrument used in this study appears to have potential in terms of specifying the particular stage level at which a given child is functioning; it therefore provides a basis for educational and therapeutic planning.

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Crippled and Other Health Impaired and Their Education

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There was general concensus among the West Point conferees that significant changes in the nature of Crippled and Other Health Impaired populations have occured in the past five to ten years. One of the aims of the Institute was to define the area of COHI in terms of the sub-groups of children who are and /or will be the target population. Because the COHI population is constantly changing it becomes necessary periodically to assess the program needs for this population. Provision of programs flexible enough to meet the changing needs will put an end to the current practive of trying to fit the COHI child into existing and sometimes unsuitable programs. Periodic investigation is critically related to modern school planning, classroom organization practices, educational methodology, teacher education curricula and certification standards.

Revolutions in medical treatments have brought about a great reduction in chronic illness and crippling conditions resulting from infectious diseases. The incidence of poliomylitis, osteomylitis, tuberculosis and many of the other classical crippling conditions has virtually diminished. Increased social and physical activity have resulted in an increase in crippling conditions resulting from accident and trauma. Over one half of these occur to children under the age of five. We are beginning to be faced with the children of the "drug society" as well as with the "battered child syndrome." The participants agreed that for the most part, the children with whom we are now working are more severely involved youngsters than those attending special education programs even a few years ago. They are the children with complex hereditary, congenital or traumatic disorders that present more demanding

education needs. These children manifest multi-sensory deficiencies, perceptual inadequacies, communication barriers, social and emotional complexities and retarded intellectual ability.

This paper was prepared from information presented at the Special Study Institute on Professional Preparation for Educators of Crippled Children, West Point New York, December 9-12, 1970.

While a preferred definition did not emerge from the institute's deliberations, a number of factors and combinations of variables were suggested as requirements for describing the children in all their diversity. Most significant was not the distinction of these variables but rather the interrelationships that exist among them. The implication is that the COHI population is representative of many problems and that a concern with identifying a primary physical or medical impairment may be restrictive to future educational planning. COHI has become a multiply disabled population.

From responses to a pre-institute questionnaire, the following composite definition emerged: The COHI population appears to be seen in three dimensions: physical definition, functional problems and programmatic modifications. The population is comprised of those children and adults who as a results of permanent, temporary or intermittant medical disabilities require modifications in curriculum and instructional strategies. Frequent separation from family and a lack of adequate parental guidance contribute to secondary emotional problems of the COHI population. The child's physical limitations are often the basis of functional retardation as well as sensory perceptual and conceptual deficits. The development of realistic expectation levels requires the identification of additional and unique instructional materials, equipment and strategies for evaluation."

The COHI population seems more nebulous than do some other special education populations. The range and kind of impairments involve a multitude of bodily structures and the disease complexes that affect them. The educational implications of crippling conditions are also multiple in origin. Research in terms of the educational consequences of physical impairment has been meager. There is agreement that physical disability is not an entity of and by itself. The question of the education process in relationship to disability should receive attention as a critical issue. COHI is a comprehensive category encompassing many educationally divergent children. School placement has generally been medically homogeneous with little attention given to diversity in terms of chronological age, mental age, level of achievement, level of social and emotional development and ability to communicate. The growth and establishment of new teaching methodologies have made evident the need for redefinition of COHI in terms of educational approaches that may be most appropriate to each of these children.

Some COHI children have rather circumscribed problems which can be lived with in a relatively normal fashion while others are so deviant that goals for them must be very different. Modifications of the program and special services will vary depending upon the child's needs and progress. For this reason the special education teacher should play a central role in determining educational placement and program for the COHI child. An educationally relevant definition of COHI populations necessarily places each child on an educational-diagnostic-learning continuum. Curriculum provisions should be made for (1)children who should proceed immediately to the regular school program (2) those whose handicaps preclude placement in a regular program at this time and (3) those whose handicap precludes independent functioning.

A large proportion of what has been considered the traditional COHI population can and should be made part of the regular classes. Not requiring specific accomodations, they will profit from virtually any well designed program, responding to usual methods and materials. There is little need for modifying or adapting curricula or methods for teaching a child when the disability is purely medical and there are no secondary educational handicaps. Included in this group may be accident victims and those persons with short term illnesses. These are the children with mild, moderate, or severe physical involvments who can usually learn in a normal manner. For them the educational program itself necessitates little if any unique educational interventions. Even for those who are at home or in the hospital, special education may be no more than regular education in a special settings.

With many physically handicapped children the use of special provisions (e.g.electric typewriter, standing table) can successfully eliminate the need for special class placement. For these children, restrictions imposed by architectural barriers and special transportation needs too often limit opportunities for proper educational placement. Many of the problems faced by this subgroup of COHI youngsters appear to reflect difficulties inherent in administrative planning rather than in educational program.

While the Institute urged work toward placement in regular classes (with supportive services when necessary) there is a group of COHI children, with multiple disabilities, requiring either short or long term placement in a special program. This is the group of children, with not only physical impairment but also with concomitant educational handicaps, who demonstrate a need for specific instructional programs to achieve competency in academic or social skills.

The institute participants were keenly aware that these are the

children with crippling and other health handicaps who seldom have normal environmental experiences. In the main, such children have restricted social, cultural, and general interactional experiences. The average child, by the time he has reached kindergarten age has learned to perceive and appreciate the physical relationships and personal implications of his environment. Inability to move limits or precludes early exploration and sensory experimentation. Defects in communication impair personal expression and difficulty in forming lasting social relationships result in limited emotional development.

The COHI child approaches school age as an academic retardate in that he has an experiential deficit in those areas upon which primary education is based. Between the ages of 1-3 years, there occur three major stages of development: the ability to locomote, the ability to comprehend and use language, and the ability to respond to the imposition of socialization demands. The child with a physical handicap usually shows developmental lags in one or more of these areas.

As specialized skills develop, we see the child acquire the ability to receive and produce refined visual and accoustical information. The very young child requires a great deal of motor involvement in the interpretation of sensory data. Disturbances in perceptual analysis and perceptual synthesis are commonly noted difficulties of a population that manifest limitations and aberations of motor functioning.

Mandatory and permissive legislation has resulted in a younger handicapped population in the schools. It is anticipated that a concentrated effort in infant and early childhood programs will provide maximum preparation for elementary programs within mainstream education. If our efforts in compensating for sensory, social and academic preparation are successful at the early childhood level we should be able to reduce the number of special programs needed at the elementary and secondary levels.

As we work toward this goal, teachers must play the role of trouble shooter; stepping up efforts to develop each child's latent resources- intellectual and social- in order to facilitate successful integration.

Even when there are universal and effective pre-school programs, there will remain a portion of the COHI population who will be able to proceed through the general academic curriculum only if the content is taught in a different manner. Overt environment support such as large print, uncluttered pages, color coding, teaching carrols, etc. combine academic training with training in perceptual areas.

As they grow older, COHI youngsters are deprived of a wide range of everyday experiences which,for the normal child, constitute the foundations of learning. Lack of educational continuity during periods of medical treatment and periods of homebound and hospital teaching contribute to academic retardation and place the COHI child at a disadvantage. Programs should not only take this deprivation into account but try to remedy it. These are the children who may require additional cumulative school time and/or an enriched program in order to proceed through the general academic curriculum.

There is increased interest and concern about programs on the secondary level. Areas of concern include opportunities for attending college as well as curricula services suitable for the non-college bound youngsters. This latter group is further divided into those who will go into competitive employment and those who will not. While there is, at present a need for secondary school services, whether specialized secondary and vocational education programs are to be expanded on a temporary or permanent basis will depend in part upon how successful special education can be at earlier education levels.

An additional subgroup of those requiring special education services, are those COHI youngsters for whom it is necessary to vary not only the

teaching stratagies but also the content and focus of the instructional program. For these severely and multiply handicapped populations, the usual vocational and avocational goals may be impossible to attain. It is conceivable that educators, and society as a whole will need to prepare a contrived and somewhat sheltered but action-oriented environment for their adult living.

Problems that may be faced by all subgroups of CHOI children stem from the effects of the child's relationship with himself, his parents and his peers. The emotional and psychological implications of physical disability extend into the development of a concept of self. The inability of the handicapped individual to predict the acceptance of himself as apart from his condition often leads to problems in social development. Secondary difficulties are related to inconsistent parental guidance, numerous separations from the family, and the inability of the COHI child to keep pace with his peers. Overprotected by his parents, the child may develop a lack of self-sufficiency and self-confidence. He may expect to gain acceptance and rewards without earning them.

For a vast majority of COHI children, resultant limitations of physical dexterity, locomotion, and vitality have always produced a multiplicity of psychological and intellectual handicaps. As educational methodology becomes more refined, increased professional competence allows us to attend to those deviations in sensory, perceptual, and conceptual processes shown by COHI youngsters.

Adjustments needed to satisfy special academic needs imposed by COHI conditions appear to be more easily recognized than those adjustments needed to adequately tend to emotional problems imposed by the same handicap. Research is needed regarding those factors that foster the development to emotional and social maturity in the handicapped youngster.

Focusing on those skills that will foster successful entry into the

mainstream of education, no strict educational program can be adhered to. Programs have to be quickly redesigned to augment specific deficits. Recognizing that some abilities, skills and knowledges are more important than others for a given child at a given time, special education must accordingly assume the responsibilty for making value decisions.

The proper educational objective for each COHI child should be based on how far he can progress in meeting the demands of life. The guiding principle for the education process becomes one of devising a school program where each child has the opportunity to work at his own level,in his own preferred way, progressing as far and as fast as his learning characteristic will permit. Whether we deal with the highest or lowest functioning handicapped child, the educator's responsibility rests in instruction based upon the selection of content to be learned and teaching strategies to be used.

COHI children should be described in terms of what they can do, what they have learned and under what conditions they can best respond. The educator's energy is directed toward remediation and compensation regardless of the degree of impairment. Hence, it becomes necessary to describe the child in terms of specific behavioral deficits as well as achievement limitations. Special educators should require descriptive evaluation of the manner in which the child interacts with his environment-the behavioral consequences of physical impairments.

If a teacher knows a child in terms of specific assets and deficits in perceptual motor, language, and cognitive skills, in terms of the nature of his response to reinforcement, in terms of his relationship between performance and task structure, then these data become the basis for making decisions regarding specific educational objectives, educational placement and instructional methods and materials.

Greater educational integration of the disabled youngster was seen as requiring flexible administrative models for easy mobility through a

continuum of educational services including infant education, pre-school, elementary and secondary schools, vocational training, college preparation and adult education. In viewing long term goals for the COHI population, intensive specialization should be reserved for those severely and multiply handicapped children for whom it is absolutely essential for educational progress. In general, participant concensus indicated that the objective of special education for the COHI child is to maximize the individuals ability to achieve relative to his own potential and to close the gap between his potential and his level of achievement. This is the gap which so often characterizes the performance of COHI children. It was clear that as soon as children are able to participate they should be placed into the regular program. When necessary, administrative support should be provided in terms of special materials, equipment and ancillary therapies. His education however, should be the responsibility of mainstream educational personnel. Special education can no longer afford to relieve regular education of the responsibility for quality education for disabled school population.

The Dr. J.P. Lord School for the Physically Handicapped Child

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The Dr. J.P Lord School is an Omaha Public School but is unique in many ways. It has served students who are orthopedically handicapped or are handicapped in some way that is related to a health problem, such as heart disease or asthma. All children are integrated into the total school program, but each is taught according to his achievement level. It has had the opportunity to serve children and parents that have traveled all over the world. This opportunity is made available to us because of the S.A.C. operation at Offut Air Force Base. Many people transfer to Omaha just for the school and agree that it is one of the best in the country and truly deserves the title, "The Happiest School".

The Omaha Public Schools system has long been concerned with meeting the needs of individual students regardless of race or creed. The Department of Special Education's philosophy is to provide the handicapped students maximum educational opportunities with minimum segregation. We do not condone racism, whether it is red, white or black, but rather we look at the needs of the individual child and assign the child to the program that is acceptable to the parent and will best meet the child's developmental needs. We also believe that the child who is capable of helping others should be given the opportunity to give of himself if he desires.

We believe in the early identification of children with special needs and the Diagnostic Prescriptive Early Childhood education programs, as found in our full-day kindergarten class. Here the child is programmed in the morning and in the afternoon. Our program at Dr. J.P. Lord School served children from 2½ years of age through the 8th grade achievement level. Our Kindergarten has programmed as many as 21 children, without an aide, who have ranged between 60 and 135 I.Q. as measured by a certified psychologist. The last three years these children have had the skills to read in a language experience approach to reading by the end of the third quarter. 60-85 EMR.

An example of our diagnostic-prescriptive teaching is the little girl who was diagnosed as trainable by the University Medical School psychologist. Since the Omaha Public Schools train teachers in the summer, the psychologist recommended the child be placed in the developmental program at the Trainable level. This child was 8 years of age and had never been in school before. She was the type of child we were looking for to evaluate! The teacher felt she should be placed in the educable level because she seemed to have more ability, even though she was very hyperactive, agressive, and hostile. She was placed there and exhibited the same type of behavior but she seemed to be able to do more if the key could be found. We then placed her in the language development program where she is at the present time. She has been taught to read, write and speak and is presently working at approximate grade level. She was also provided with glasses, hearing evaluations and a hearing aide through our auxillary services. She is also a very happy, highly motivated child loved by all who meet her. An interesting sidelight to this story is that

the "Miss Omaha" who had been participating in the sit-in at the University president's office never missed a day of volunteer work to work with this child.

We also work with small groups because these children must be able to relate to others and express their ideas to the best of their abilities.

Another program is cursive writing started at the first grade level. The child seems to be able to adapt to cursive writing and the printed page for reading without too much trouble. The problem generally arises when he returns to the normal school before the third grade. The Gestalt concept is used and as one child stated, "I don't see so many parts of the word this way."

Every child is expected to use cursive writing if at all possible, but when they can't . . .

we start the typewriter at the kindergarten level in our perceptual programming, and the electric typewriter at the first grade level.

The reason we started using the electric typewriter was because of the young cerebral palsy boy who could not use his arms or legs but could move his head a little. He could answer questions by shaking his head "yes" or "no" while you spelled the word and guessed what he was trying to tell you. His neighbor made him a headstick and we purchased an electric typewriter. He proceeded to do the 4th-5th grade work in one year. He has the skills to do tenth grade work at the present time. He also is able to use the language board and can beat most people in a game of checkers.

Our language development program is based on the sound educational philosophy that a child learns best through his senses; smelling, seeing, tasting, feeling and hearing. The teacher has used this approach with our central language disordered children along with the normal orthopedically handicapped child.

Our speech therapist has also worked with the teacher on the language development program. She recommends techniques and lessons to the teacher. She also supported the program by developing a color coding system. The language board with proper parts of speech were placed on a board, surrounded by a color. She had colored cubes corresponding to the colors on the language board. As the child worked at developing sentences he could go to the corresponding color on the board and pick out an appropriate word to use. These children who could not speak in 1964 can now carry on a conversation with you and are presently enrolled in other programs in the Omaha Public Schools.

Another way that the speech therapist supports the educational program is by working on basic sounds in the reading readiness program and also words in the reading program.

The occupational program at the Dr. J.P. Lord School is based upon daily living skills and is integrated into the educational programs through dressing, feeding, typing and writing skills.

She has even worked with the "Downs" child on cursive writing and not the manuscript writing that we will discuss later. This little boy with "Downs syndrome" is presently in the second grade. He has been doing cursive writing for two years and has been through the theraputic nursery school. I do have slides showing the perceptual programming that we did to teach him to read and do arithmetic from kindergarten through the first grade.

Our registered physical therapist works with our children in perceptual motor training either on an individual basis or in small groups such as we see here.

Her movement education program is to enhance body-hand image, locomotor abilities, visual motor integration of hand-eye, body-eye, foot-eye, balances of various types - static and dynamic - and those designed to lead toward useful classroom skills and socially desirable sport skills.

Body movement are utilized as a learning experience to enhance serial memory ability, pattern recognition and manipulations by using tactile and visual modalities. We see here how she works with the children on right and left concepts through music and motor movement - and also body image which is so important to the handicapped child.

She also works with the severely involved child as we see here, under the Doctor's prescription. All therapy in the Dr. J.P. Lord School is free when the child is enrolled in the school. The cost for the program this year was $1435.00 per child, which is certainly below the national average of $2,500.00 per child.

The physical education teacher is also involved in motor movement and basic skills. Here we see her working with the children on colors and shapes which is supporting the classroom teacher. She also gives her lesson plans to the teachers along with activities that they may use in their classroom.

The Omaha Public Schools and the Department of Special Education feel it is a must to work with other institutions such as the University of Nebraska at Omaha Adaptive Physical Education class under the direction of Dr. Wegner. His students spend several hours a week working, under the direction of our physical therapist, with each individual child. The total movement of the body is used as a learning modality. If children can be provided with adequate direction and interpretation in the realm of movement, children are then rendered with power of self-knowledge that will enable them to live and learn more happily in a complicated, ever-changing word.
One exciting program was when the senior students from an exclusive private school spent two weeks working full days at the Dr. J.P. Lord School, and made a tremendous impact on our children. Needless to say, our children made an impact on them, and several of these High School students are going to be teachers and therapists when they finish their college courses.

Resource teachers for the blind or visually impaired and the acoustically handicapped are available to aid the students and teachers when they are needed.

Our blind or visually impaired therapeutic nursery program starts at 2½ years of age. It is a half-day program with no tuition charge to Omaha Public School students.

The early childhood program for blind and visually impaired is based on teaching the child readiness skills for either the Dr. J.P. Lord School or the "normal" school program.

Our therapeutic nursery school for those children who have above 60 I.Q. and are physically handicapped starts at 2½ years of age. The teachers and therapist work together as a team to obtain maximum development so that they may return to a "normal" school as quickly as possible.

Another unique program is our Title VI therapeutic nursery school. Our two teachers are housed in the University of Nebraska Medical School, Meyers Children's Rehabilitation Institute, which is physically connected with the Dr. J.P. Lord School in the medical complex. Here a program that was "dead" was not only "raised" but you will hear later about the massive expansion into the deaf-blind and language development programs. The uniqueness is where the University of Nebraska Medical School, the University of Nebraska at Omaha, and the Omaha Public Schools combined to help those children who are multi-handicapped from 2½ through eight years of age.
Our first aim is the adaptation of the child's physical limitations to the environment or adaptation of the environment to the child's physical limitation, by observing his way of functioning and making possible his maximum participation in the gradual stages of development by adjusting methods, techniques, and equipment.

The second aim is the appraisal and preliminary orientation through studying each child and the degree of completeness of his experiences and background. Bringing the child to, or bring to the child, actual first-hand contact with the world in which we live. One must dramatize with the child in a group every day situations in a way understandable to him and contributing to his orientation to, and clarification of, the environment.

The third aim is to promote the development of the child's learning faculties by providing opportunity for sensory evaluation and training for manual activities; for example, the cerebral palsy child. This is the time to start testing the senses at the functional level for acquiring a store of useful concepts and desirable work habits, for comprehensive and expressive communication for enrichment and enjoyment of his existence as a child.

The fourth aim is the coordination of the child's program by interrelating the nursery school experience with the therapy program and by helping in the carry-over of self-help activities into the play, the school and the home.

The fifth aim is to accommodate the possible deviation in the child's psychological behavior that may have an organic basis resulting from a central nervous system disorder by studying his reaction and structuring the environment to facilitate his learning.

The sixth aim is to provide a situation for teacher-training, to show what tools must be used to teach the multi-handicapped and thus helping the teacher gain the techniques and tools to teach the "normal" as well as the handicapped child.

The seventh aim is to help the child in his emotional and social adjustment through degrees of maturity of which he is capable and by guiding the parents in their understanding and cooperation in this development.

Ultimately to integrate them into as normal an educational situation as their development will allow.

Some of our children are integrated into the trainable mentally retarded programs. Their IQ's as defined in Nebraska, are between 30 and 59. Let us now look at training the child to write.

The paper which is available to you will explain the history and background and goes into more detail than I will here, but there are six basic strokes used:

Down
Across
Slant Right
Slant Left
Circle Left
Circle Right

With these six basic strokes, a child can make any letter of the alphabet.

The ultimate goal is legibility. This is the way the writing looks at the highest level. The application form for social security and . . .

for a living vocabulary.

A child is taught to "feel" the strokes, such as the across stroke. You will notice that most of the materials used are teacher-made, such as this. The material here is sandpaper, but it is limited only to the imagination of the teacher.

Here a child is making the "across stroke" with color cued material. The teacher verbalizes the stroke as he makes them. The child starts on the green dot and stops on the red dot.

Next, we trace the dots - first on the laminated copy and next by himself.

The next step is using graph paper and teaching a spatial concept. The child must put each letter in a box.

We follow this with copying words - by now he is beginning to recognize the letters and words.

The vocabulary used is part of the reading vocabulary such as stop, slow, don't, go, wait, quiet, start, walk, no, and many other survival words.

The next goal is to polish and perfect the writing on upper intermediate grade paper and as we stated earlier, to make it "legible".

These are only a few of the exciting programs we have in the Omaha Public Schools, and this open door is an invitation to visit us if you feel we can help you, or your staff, meet the individual needs of the child.

This invitation is "presented by the Omaha Public Schools, Dr. Owen A. Knutzen, Superintendent", who sends each of you his greetings for a successful convention.

A MODEL TITLE VI-B PROGRAM FOR PHYSICALLY HANDICAPPED CHILDREN

Joe Gaughan

Nebraska State Department of Education

The Nebraska Department of Education feels that three or four criteria must be met by Title VI projects to be considered model or outstanding projects. To be more specific a project should provide a service to children in terms of their individual needs and a service to the State by setting an example for emulation and/or imitation while meeting a high state-wide priority. A model project in Nebraska hopefully does the following:

It Generates Interest In Programming For The Child

↘

Which Generates Human And Fiscal Resources

↘

Which Generates Services To A Larger Number Of Children

The project Mr. Galusha will discuss with you today has accomplished all of the above. The Therapeutic Nursery School has proven to be effective in child centered terms which I am sure Mr. Galusha's presentation will more fully describe.

I would like to use the short amount of time for my presentation to mention some very significant spin offs of the Therapeutic Nursery School.

Interest during the first year of this project brought about the passage of a state law - which provided for a program to be established at the Meyer Children's Rehabilitation Institute, University of Nebraska Medical Center - a program of thorough diagnosis both medical and educational, medical treatment, the development of an educational plan for multiple handicapped children and the coordination of supportive services at the local level. The results of the project and further interest brought about an expansion of programming within the Omaha Public Schools. As usual the availability of a program brought with it a vast number of requests for service.

The Title VI-B portion ($15,000) of what has become available financially since the initiation of the Title VI-B project in January of 1969 looks insignificant. The staffs of the Meyer Children's Rehabilitation Institute and the Omaha Public Schools have since generated the following funds for the expansion of the program.

Mental Retardation Staffing Grant	$ 48,803
U.S.O.E., B.E.H. Early Childhood Education	115,800
Mountain Plains Regional Deaf-Blind Center	15,000
Department of Labor - New Careers Program	
Training of Technical Help	38,688
Training of Aides (Teacher)	36,000
Nebraska State Department of Education	26,000
Meyer Foundation	175,000
Mental Retardation Construction Act	100,000
Vocational Rehabilitation Services	100,000

As you can see from the above, human resources are being increased through the new Careers Program grant. The Mental Retardation Staffing grant is being utilized to train the family, physical therapists in the child's community and teachers in methods of working with the multiple handicapped child in their care. It is also being used to generate further interest in providing the necessary screening, medical diagnosis, educational diagnosis, and follow through programming on a state-wide basis. The University of Nebraska at Omaha has also used this program as a training base to stimulate interest in working with the multiple handicapped child. Further, University of Nebraska at Omaha has provided a consultant to the program to aide in curriculum development, methods and materials.

Needless to say the availability of greater human and fiscal resources generated as a result of the Title VI-B Project has meant a large increase in the numbers of pre-school multiple handicapped children served. We feel also that the Therapeutic Nursery School has provided a good example of the need for early childhood education and has demonstrated early education's impact on the development of human potential. We in the State of Nebraska feel this program has demonstrated that a local Educational Agency (The Omaha Public Schools) a University Medical Center and a University Teacher Training Program by cooperative effort can work together for the betterment of the handicapped child. But most importantly, these projects have begun to meet the early education needs of a formerly unserved population of handicapped individuals who through pre-school education and training are able to more readily adjust to school programs.